NOVEMBER/DECEMBER 2023

DAM23/GAM23 — MOLECULAR BIOLOGY AND MICROBIAL GENETICS

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define cot curve.
2. What is renaturation of DNA?
3. List out the enzymes involved in replication.
4. What is meant by Mismatch repair of DNA?
5. What is the main function of tRNA?
6. Define polyadenylation.
7. What is meant by vector?
8. Mention the any two applications of PCR.
9. Define Nil gene.
10. Define antigen.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Draw a neat sketch on structure of DNA and explain in brief.

Or

(b) Explain in brief about chloroplast DNA.

12. (a) Give an account on rolling circle replication of DNA.

Or

(b) Write a short note on excision repair.

13. (a) Discuss in brief about the mechanism of transcription.

Or

(b) Write a brief account on post-transcriptional processing.

14. (a) How do you prepare genomic library?

Or

(b) Give an account on plasmids as a vector.

15. (a) Briefly explains synthetic DNA.

Or

(b) Describe about the social impact of rDNA technology.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Write a detailed note on DNA organization in prokaryotes.

17. Discuss in detail about the enzymes involved in DNA replication.

18. Elaborate the translation process.

19. Elucidate the principle, procedure and application of Polymerase chain reaction process.

20. Give an elaborate account on Monoclonal antibody techniques.

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